

IN THE CLAIMS

Please amend the presently pending claims as follows:

1-18. Cancelled.

19. (New) Method for reception of radio data transmitted between at least two emitters and one receiver wherein the method comprises:

a first step of receiving data transmitted by at least one multicarrier data transmission signal, the said multicarrier signal being formed from a sequence in time of symbols comprising firstly information data elements, and secondly reference elements called pilots, distributed within the said information data elements according to a predetermined pattern, and for which the value during emission is known to the said receiver, at least two of the said emitters using distinct pilot patterns such that at any given moment and at any given frequency, the said receiver can only receive one pilot from the said emitters;

a second step of identifying the emitter, which emitted the said data, using a control information transmission signal, which allows notably the said receiver, upon data reception, to identify the said emitter that emitted them; and

a third step of determining the said pilot pattern used by the said identified emitter.

20. (New) Method for reception of data according to claim 19, wherein, when the said pilot pattern was generated using a generation function for which one parameter is an identifier of the said associated emitter, the said step of determining implements the said generation function as a function of the said identified emitter.

21. (New) Method for reception of data according to claim 19 and further comprising a step for extracting the said pilots from the said multicarrier data transmission signal, and a step for estimating the transfer function of a transmission channel associated with the said multicarrier signal.

22. (New) Method for reception of data according to claim 19, wherein the said multicarrier signal is of the OFDM type.

23. (New) Method for reception of data according to claim 19, wherein each of the said emitters uses a specific pilot pattern.

24. (New) Method for reception of data according to claim 19, wherein said method is implemented in a cellular radio communication network, the said emitters are base stations of the said network, and the said receiver is a mobile terminal.

25. (New) Cellular radio communication system comprising:

at least two emitters and one receiver, implementing at least one multicarrier data transmission signal, the said multicarrier signal being formed from a time sequence of symbols composed firstly of information data elements and secondly of reference elements called pilots distributed within the said information data elements according to a predetermined pattern, and for which the value on emission is known to the said receiver;

wherein at least two of the said emitters use distinct pilot patterns, such that only one pilot can be received by the said receiver from the said emitters, at a given time and at a given frequency; and

wherein said receiver comprises:

first means of receiving data transmitted by the said multicarrier data transmission signal;

second means of identifying the emitter that emitted the said data, using a control information

transmission signal, which allows notably the said receiver to identify the said emitter that emitted the data when it receives them; and
third means of determining the said pilot pattern used by the said identified emitter.

26. (New) Mobile in a cellular radio communication system, comprising:

means of receiving radio data transmitted by at least two emitters, in the form of at least one multicarrier data transmission signal, the said multicarrier signal being formed from a time sequence of symbols composed firstly of information data elements and secondly of reference elements called pilots distributed within the said information data elements according to a predetermined pattern, and for which the value on emission is known to the said mobile, at least two of the said emitters using distinct pilot patterns, such that only one pilot can be received by the said receiver from the said emitters, at a given time and at a given frequency;

means of receiving data transmitted by the said multicarrier data transmission signal;

means of identifying the emitter that emitted the said data, using a control information transmission signal, which allows notably the said receiver to identify the said emitter that emitted the data when it receives them; and

means of determining the said pilot pattern used by the said identified emitter.

27. (New) A cellular radio communication mobile comprising a receiver adapted to receive radio data transmitted by at least two emitters, in the form of at least one multicarrier data transmission signal, the said multicarrier signal being formed from a time sequence of symbols composed firstly of information data elements and secondly of reference elements called pilots

distributed within the said information data elements according to a predetermined pattern, and for which the value on emission is known to the said mobile, at least two of the said emitters using distinct pilot patterns, such that only one pilot can be received by the said receiver from the said emitters, at a given time and at a given frequency, wherein the receiver is adapted to identify the emitter that emitted the said data, using a control information transmission signal, which allows the said receiver to identify the said emitter that emitted the data when it receives them, and to determine the said pilot pattern used by the said identified emitter.